

In the Claims:

Claims 1-74 (Canceled).

75. (Currently Amended) An electrical connector comprising:
a first mating connector substrate including a first mating connector face;
a first array of inductors on the first mating connector face;
a second mating connector substrate including a second mating connector face; and
a second array of inductors on the second mating connector face;
the first and second mating connector substrates being configured to maintain the first and second mating connector faces in closely spaced apart relation to provide inductive coupling between corresponding inductors in the first and second arrays of inductors.

76. (Currently Amended) An electrical connector according to Claim 75 further comprising at least one pin and at least one corresponding pin clip on at least one of the first and second mating connector substrates and configured to maintain the first and second mating connector faces in the closely spaced apart relation.

77. (Original) An electrical connector according to Claim 75 wherein the inductors in the first and second arrays of inductors also include capacitance associated therewith.

Claims 78-89 (Canceled).

90. (New) An electrical connector according to Claim 75 further comprising a DC offset compensating receiver that is coupled to at least one of the inductors in the first and/or second arrays of inductors.

91. (New) An electrical connector according to Claim 75 further comprising a current mode driver that is coupled to at least one of the inductors in the first and/or second arrays of inductors.

92. (New) An electrical connector according to Claim 75 further comprising a first mutual inductance coupling element on at least one of the inductors in the first array of inductors and a second mutual inductance coupling element on a corresponding at least one of the inductors in the second array of inductors.

93. (New) An electrical connector according to Claim 75 wherein the first and second mating connector substrates are configured to separably maintain the first and second mating connector faces in closely spaced apart relation.

94. (New) An electrical connector according to Claim 75 wherein the first and second mating connector substrates are configured to fixedly maintain the first and second mating connector faces in closely spaced apart relation.

95. (New) An electrical connector part comprising:
a first mating connector substrate including a first mating connector face;
a first array of inductors on the first connector mating face; and
a mechanical interface that is configured to maintain the first mating connector face in closely spaced apart relation to a second mating connector face having a second array of inductors thereon, to provide inductive coupling between corresponding inductors in the first and second arrays of inductors.

96. (New) An electrical connector part according to Claim 95 wherein the mechanical interface comprises at least one pin and/or at least one pin clip on the first mating connector substrate.

97. (New) An electrical connector part according to Claim 95 wherein the inductors in the first array of inductors also include capacitance associated therewith.

98. (New) An electrical connector part according to Claim 95 further comprising a DC offset compensating receiver that is coupled to at least one of the inductors in the first array of inductors.

99. (New) An electrical connector part according to Claim 95 further comprising a current mode driver that is coupled to at least one of the inductors in the first array of inductors.

100. (New) An electrical connector part according to Claim 95 further comprising a mutual inductance coupling element on at least one of the inductors in the first array of inductors.

101. (New) An electrical connector part according to Claim 95 wherein the mechanical interface is configured to separably maintain the first and second mating connector faces in closely spaced apart relation.

102. (New) An electrical connector according to Claim 95 wherein the mechanical interface is configured to fixedly maintain the first and second mating connector faces in closely spaced apart relation.

103. (New) An electrical connector part comprising:
a first mating connector substrate including a first mating connector face;
a first array of inductors on the first connector mating face; and
means for maintaining the first mating connector face in closely spaced apart relation to a second mating connector face having a second array of inductors thereon, to provide inductive coupling between corresponding inductors in the first and second arrays of inductors.

104. (New) An electrical connector part according to Claim 103 wherein the means for maintaining comprises at least one pin and/or at least one pin clip on the first mating connector substrate.

105. (New) An electrical connector part according to Claim 103 wherein the inductors in the first array of inductors also include capacitance associated therewith.

106. (New) An electrical connector part according to Claim 103 further comprising a DC offset compensating receiver that is coupled to at least one of the inductors in the first array of inductors.

107. (New) An electrical connector part according to Claim 103 further comprising a current mode driver that is coupled to at least one of the inductors in the first array of inductors.

108. (New) An electrical connector part according to Claim 103 further comprising a mutual inductance coupling element on at least one of the inductors in the first array of inductors.

109. (New) An electrical connector part according to Claim 103 wherein the means for maintaining comprises means for separably maintaining the first and second mating connector faces in closely spaced apart relation.

110. (New) An electrical connector according to Claim 103 wherein the means for maintaining comprises means for fixedly maintaining the first and second mating connector faces in closely spaced apart relation.